

## **1.0 INTRODUCTION**

The Dominguez Watershed Management Master Plan (WMMP) is a comprehensive document to assist stakeholders in the protection, enhancement, and restoration of the environment and beneficial uses of the Dominguez Watershed. The WMMP provides an overview of current conditions within the watershed, identifies and addresses watershed problems and issues, provides solutions to those problems in the form of an action plan of recommended measures and projects, and identifies potential funding opportunities to assist with implementation of the plan.

This section provides background information on the purpose and need of the WMMP (Subsection 1.1), approach to preparing the plan (Subsection 1.2), goals for the WMMP (Subsection 1.3), overview of the watershed (Subsection 1.4), intended uses of the WMMP (Subsection 1.5), and organization of the document (Subsection 1.6).

### ***1.1 Purpose and Need***

The purpose of the WMMP is to provide background and guidance to assist stakeholders with watershed management for the Dominguez Watershed. Watershed management is the integration and coordination of activities that affect natural resources and water quality within a geographically defined drainage area. Watershed management fulfills an important planning need in that it strives to balance services such as flood protection, water conservation, and recreation with conscientious management to reduce pollution of waters and to protect and enhance natural resources.

Funding for this project has been provided in part through a contract with the State Water Resources Control Board (SWRCB) pursuant to the Costa-Machado Water Act of 2000 (Proposition 13) and any amendments thereto for the implementation of California's Non-point Source Pollution Control Program. The SWRCB and the nine Regional Water Quality Control Boards (RWQCBs), including Los Angeles (LARWQCB), have implemented a Watershed Management Initiative to provide water resource protection, enhancement, and restoration while balancing economic and environmental impacts. This initiative is to be accomplished using a watershed management approach. The contents of this document do not necessarily reflect the views and policies of the SWRCB, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

### ***1.2 Approach to Preparing the Plan***

The preparation of this WMMP involved a proactive approach by stakeholders in the Dominguez Watershed to plan and implement watershed management solutions. The first step to preparing the WMMP was to establish the Dominguez Watershed Advisory Council (DWAC). This group, established after submittal of the grant application, includes local governmental representatives, environmental groups, regulating agencies, members of business and industry, water and sewer service providers, and private citizens.

#### **DWAC Vision Statement:**

***"An urban industrial watershed in balance with the environment."***

The purpose of the DWAC is to:

*“Create and support implementation of a comprehensive watershed management master plan (WMMP), which will address current and potential problems and issues, potential solutions, prioritization of projects, funding opportunities, restoration/enhancement measures, and monitoring programs within the Dominguez Watershed.”*

The objectives of the DWAC are to:

- Raise public awareness of the Dominguez Watershed and encourage participation in management and protection of our watershed resources.
- Identify problems and issues of importance to local citizens, groups, and users of the watershed.
- Diminish and eliminate further degradation of the watershed and its resources through better management practices.
- Promote, preserve, and protect beneficial uses of the watershed.
- Restore and enhance ecological systems of the watershed.
- Increase the viability, diversity, and health of the watershed.
- Promote science-based methods for water quality and environmental impact assessment of the watershed.
- Develop an effective approach to meeting water quality regulations for the watershed.

The Dominguez Watershed WMMP was prepared in full coordination with the DWAC. In addition, the plan was prepared in consultation with the public through public-noticed workshop meetings and consideration of review comments received on the draft WMMP. Preparers of the WMMP, including DWAC stakeholders that contributed to the development of this plan, are listed in Section 5 of this document.

The WMMP was prepared in three stages. The first stage included gathering and summarizing information on the existing conditions within the watershed. In the second stage, concerns, issues, and problems of the watershed were identified, and goals and objectives for watershed management were developed. The last stage involved developing a framework and strategic action plan for watershed management that identifies measures and projects to achieve measurable environmental improvement, and outlines potential funding opportunities for proposed actions.

### ***1.3 Goals of the Dominguez Watershed Management Master Plan***

The goals of the Dominguez WMMP were developed by the DWAC in coordination with the public. The goals are to:

- Protect and enhance water quality.
- Conserve, reuse, and recharge water supply.
- Protect, enhance, and restore native habitats and biological resources.
- Promote public awareness and involvement in watershed management.

- Implement stewardship of the watershed in balance with economic and environmental impacts.

## **1.4 Watershed Overview**

The Dominguez Watershed is located within the southern portion of Los Angeles County, California (Figure 1.4-1). The watershed encompasses approximately 345 square kilometers (133 square miles) of land and water and includes all or portions of the following jurisdictions:

Carson	Los Angeles County
Compton	Manhattan Beach
El Segundo	Palos Verdes Estates
Gardena	Rancho Palos Verdes
Hawthorne	Redondo Beach
Inglewood	Rolling Hills
Lawndale	Rolling Hills Estates
Lomita	Torrance
Long Beach	Port of Long Beach
Los Angeles	Port of Los Angeles

The cities and the zip codes within the watershed are shown on Figure 1.4-2.

Approximately 81 percent of the watershed or 93 percent of the land is developed. Residential development covers nearly 40 percent of the watershed, and another 41 percent is made up by industrial, commercial, and transportation uses. With a population of nearly 1 million, considerable demands are made on infrastructure and services within the watershed. Water supply is limited and the majority of water use is from imported sources. Parkland and open space are in short supply and generally are deficient in meeting the goal ratio of 0.4 hectare (1 acre) of park per each 1,000 population. Flooding occurs in areas of the watershed where the local storm drain system is no longer adequate.

It is estimated that 62 percent of the land is covered with impervious surfaces (e.g., asphalt, concrete), which represents the highest percentage for any watershed area in Los Angeles County. Since the majority of the watershed is urban, drainage is primarily conducted through an extensive network of underground storm drains. In reality, the storm drain system, rather than the natural topography, is what defines the boundary for the watershed. Approximately 62 percent of the runoff drains to the Dominguez Channel, which is the largest drainage feature in the watershed (Figure 1.4-3). This man-made channel, which originates in the City of Hawthorne, is 24 kilometers (15 miles) long, and empties into Los Angeles Harbor. The remaining runoff drains to retention basins for groundwater recharge; into Wilmington Drain, which empties into Machado Lake; or to the Los Angeles and Long Beach Harbors.

The watershed is officially designated as Hydrologic Unit 405.12 by the SWRCB. Water bodies within the hydrologic unit include the Dominguez Channel, Wilmington Drain, Torrance/Carson Channel ("Torrance Lateral"), Machado Lake, Los Angeles and Long Beach Harbors, and Cabrillo Beach.

Beneficial uses identified by the RWQCB for the surface water bodies in the watershed are summarized in Table 1.4-1. Listed beneficial uses for groundwater within the watershed include municipal, domestic, industrial service, industrial process, and agricultural supplies. Another type of benefit to the community is the flood protection provided by the extensive storm drainage system of the watershed.

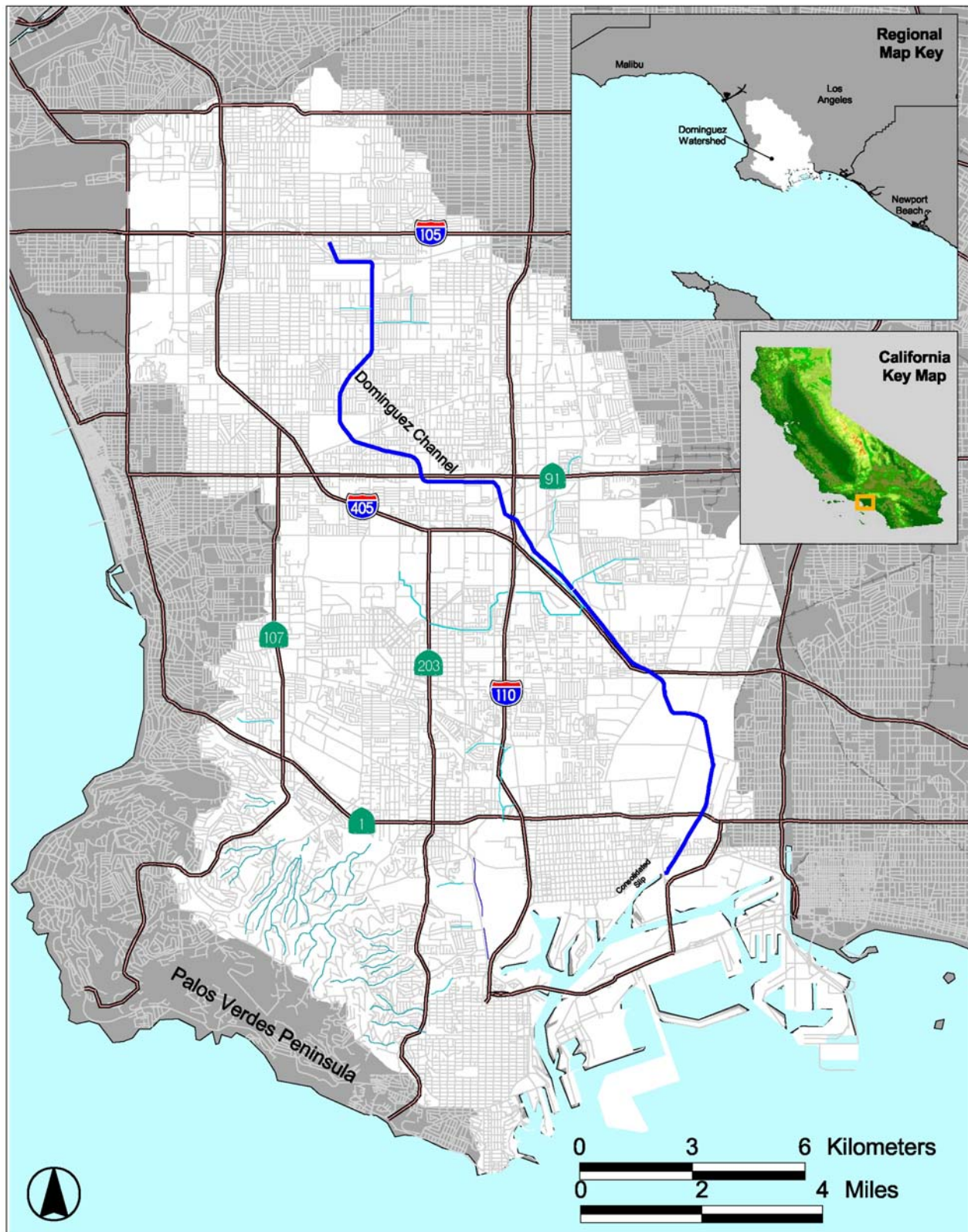


Figure I.4-1. Regional map showing the location of the Dominguez Watershed.





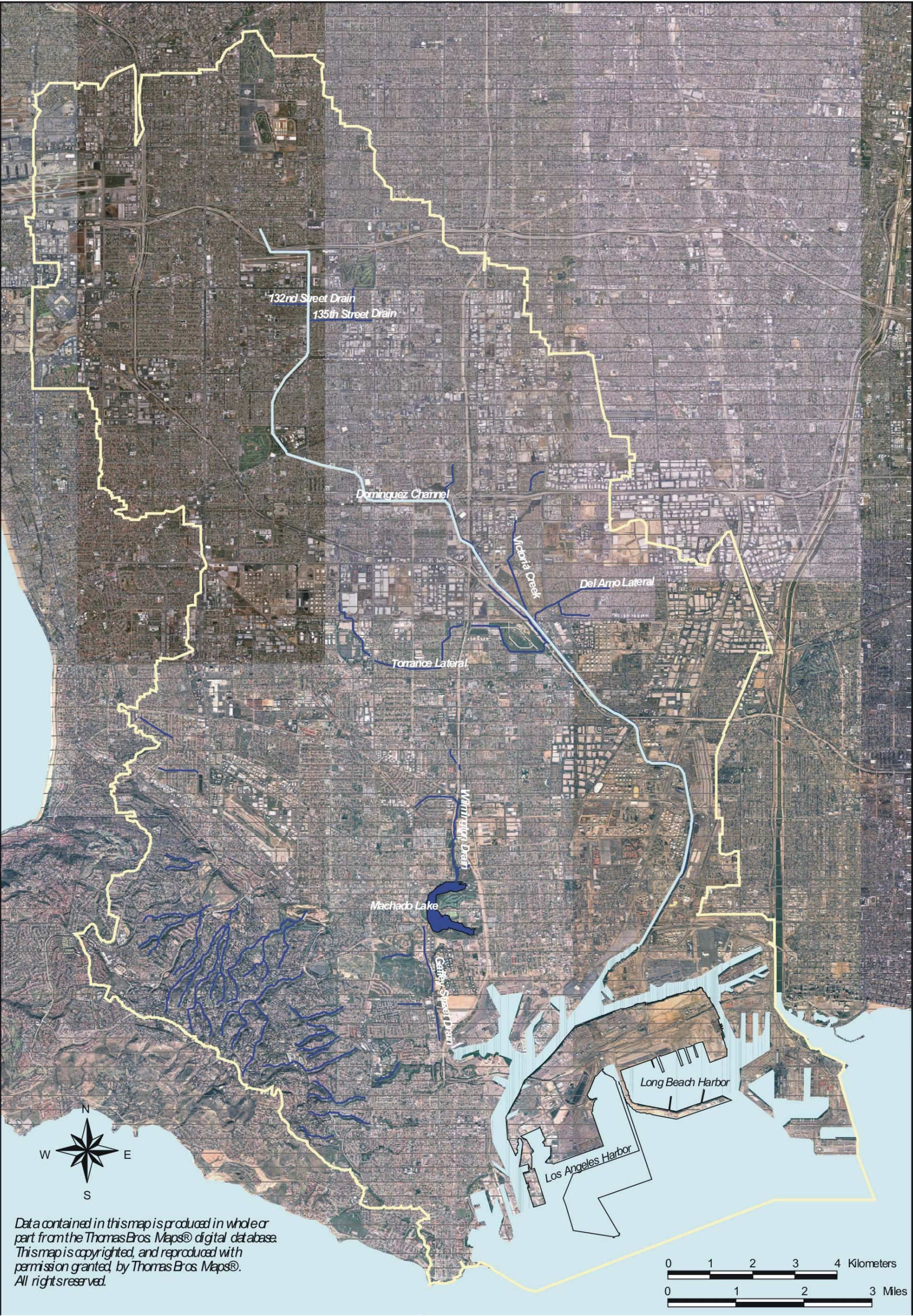


Figure I.4-3. Open channels, drainages, and receiving waters within the Dominguez Watershed.



**Table 1.4-1. Beneficial uses listed for surface waters within the Dominguez Watershed.**

<b>Beneficial Uses</b>	<b>Dominguez Channel</b>	<b>Machado Lake and Wilmington Drain<sup>1</sup></b>	<b>Los Angeles-Long Beach Harbors</b>
Municipal and Domestic Supply (MUN)	P*	P*	
Industrial Service Supply (IND)			E
Navigation (NAV)	P		E
Contact Water Recreation (REC-1)	P <sub>s</sub>	E	E
Non-Contact Water Recreation (REC-2)	E	E	E
Commercial and Sport Fishing (COMM)	E		E
Warm Freshwater Habitat (WARM)	P	E	
Estuarine Habitat (EST)	E		
Marine Habitat (MAR)	E		E
Wildlife Habitat (WILD)	E	E	E
Biological Habitats of Special Significance (BIOL)*		E	
Rare, Threatened, or Endangered Species (RARE)	E	E	E
Migration of Aquatic Organisms (MIGR)	E		E
Spawning, Reproduction and/or Early Development (SPWN)			E
Shellfish Harvesting (SHELL)			P
Wetland Habitat (WET)		E	

Notes:

P= potential beneficial use, E= existing beneficial use.

<sup>1</sup> The BIOL beneficial use was not recognized by the RWQCB in 1994; however, Machado Lake is now recognized as a Sensitive Ecological Area by Los Angeles County and the SWRCB.

\* Asterisked uses are designated under SB 88-63 and may be considered for functional exemptions RB 89-03. Some designations may be considered for exemptions at a later date.

s: Access prohibited by Los Angeles County Department of Public Works (LACDPW).

Beneficial use designations also apply to all tributaries of Dominguez Channel.

See Table 2.3-3 on page 2-80 for the complete beneficial use table.

Source: LARWQCB 1994

Each of these water bodies has been listed by the SWRCB as impaired. Depending upon location within the watershed, impairments of concern include pollutants, sediment toxicity, bacteria, algae and eutrophic conditions, and trash (Table 1.4-2).

Vacant land and open space areas account for only 7 percent of land use and 16 percent of the entire watershed. The largest habitat is associated with the Los Angeles and Long Beach Harbors, which cover 3,289 hectares (8,128 acres) or approximately 9.5 percent of the watershed. The marine receiving waters of the watershed support over 70 species of fish, 400 species of invertebrates, and 100 species of birds. Over 200 species of birds use the natural habitats at Madrona Marsh and the Ken Malloy Harbor Regional Park, which includes Machado Lake. Several hundred species also use the canyon habitats located along the southwestern boundary of the watershed. To a lesser extent, biological resources use several small, disturbed pocket wetlands and retention basins scattered throughout the watershed. Several of the species that live or migrate through the watershed are considered sensitive, and five endangered plants (California orcutt grass, coastal dunes milk-vetch, Lyon's pentachaeta, Mexican flannelbush, salt marsh bird's beak) and seven endangered or threatened animals (Palos Verdes blue butterfly, California brown pelican, California least tern, coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, Pacific pocket mouse) either do or have the potential to occur.

**Table 1.4-2. Impairments within the Dominguez Watershed.**

Hydrologic Descriptor	Water body	Segment/Area	Pollutant/Stressor	Extent of Impairment
405.12	Dominguez Channel	Above Vermont	Chromium, copper, lead, zinc, pesticides, DDT, PCBs, PAHs, ammonia, bacteria	10.8 kilometers (6.7 miles)
		Vermont to Estuary	Chromium, lead, zinc, pesticides, DDT, PAHs, benthic community effects, ammonia, bacteria	13.4 kilometers (8.3 miles)
	Los Angeles Harbor	Consolidated Slip	Cadmium, chromium, copper, lead, mercury, nickel, zinc, pesticides, DDT, PCBs, PAHs, toxaphene, sediment toxicity, benthic community effects	14.6 hectares (36 acres)
		Fish Harbor	DDT, PCBs, PAHs	13.8 hectares (34 acres)
		Southwest Slip	DDT, PCBs, sediment toxicity	25.5 hectares (63 acres)
		Main Channel	Copper, zinc, DDT, PCBs, PAHs, sediment toxicity, beach closures	112.9 hectares (279 acres)
		Inner Breakwater	DDT, PCBs, PAHs	30 hectares (74 acres)
		Cabrillo Beach (inner)	DDTs, PCBs, beach closures	0.9 kilometer (0.56 miles)
	Long Beach Harbor	Main Channel, SE, W Basin, Pier J, Breakwater	DDT, PCBs, PAHs, sediment toxicity, benthic community effects	435 hectares (1,076 acres)
	San Pedro Bay Nearshore and Offshore		Chromium, copper, zinc, DDT, PCBs, PAHs, sediment toxicity	2,330 hectares (5,758 acres)
	Machado Lake		DDT, PCBs, pesticides, ammonia, algae, eutrophic, odors, trash	18 hectares (45 acres)
	Wilmington Drain		Copper, lead, ammonia, bacteria	0.9 kilometers (0.56 miles)
	Torrance Carson Channel		Copper, lead, bacteria	5.5 kilometers (3.4 miles)

Source: SWRCB 2003

## **1.5 Intended Uses of the Watershed Management Master Plan**

The WMMP has the following several uses, which are to:

- Provide a physical description of the Dominguez Watershed and its subwatersheds.
- Describe the characteristics of land uses, water quality, habitats and biological resource utilization within the Dominguez Watershed.
- Provide an understanding of the linkages between watershed characteristics and impairments within the Dominguez Watershed.
- Summarize the issues and concerns expressed by stakeholders of the watershed.
- Communicate the goals and objectives developed for the watershed.
- Describe actions, measures, and projects for reducing and ultimately eliminating impairments and for protecting, enhancing, and/or restoring beneficial uses.
- Present a strategic plan to implement prioritized projects.



- Identify types of grants that may provide funding opportunities for the watershed projects described in this plan.

## **1.6 Organization of the Watershed Management Master Plan**

The WMMP is organized into the following sections:

### **Section 1 – Introduction**

*This section provides a brief overview of the watershed boundaries, beneficial uses and impairments, and intended uses of the WMMP.*

### **Section 2 – Background Information Report**

*The physical character, land uses, water resources, biological resources and habitat quality, and socioeconomics of the watershed are described in this section.*

### **Section 3 – Issue Statements**

*This section describes the coordination process with the public and DWAC, and summarizes issues, concerns, goals, and objectives for the WMMP based on results of the coordination process and the background information report.*

### **Section 4 – Action Plan**

*The watershed management actions, associated activities, and potential projects that were developed in response to the issues/concerns and goals/objectives are described in this section. Projects are prioritized and funding opportunities are identified for the proposed actions.*

### **Section 5 – List of Authors and Contributors**

### **Section 6 – References**

### **Appendices**